

Highway Safety Inspection Manual 2024



Foreword and Executive Lead Statement by Cabinet Member for Pride in Place, Cllr Adam Billings



As the cabinet member with responsibility for Torbay's highways, I am often approached by members of the public and my fellow councillors regarding the condition of our roads and pavements. The highway network is the largest and most expensive physical asset maintained by Torbay Council. We are responsible for more than 325 miles of roads, 500 miles of footways, 22,000 road drains and 14,000 streetlights.

If we were to build these assets today the construction cost would be over £700 million, an amount well beyond the resources of this Council. The majority of our highways were first constructed centuries ago and reality is we are managing an aged, but well used asset, that is used by all who live, work or visit Torbay.

We all want to travel on a well-maintained highway and none of us want to suffer damage or any injury as a consequence of a pothole or other defect. However, it is inevitable that with the passage of time and an ever more intensive use defects will occur as our highways deteriorate.

This Highway Safety Inspection Manual sets out how we will utilise a reasonable system of inspection and repair to address any risk presented to highway users which may arise from changes in the condition of any of the highways that we are responsible for.

This Manual fully embraces the risk-based approach that is promoted by national best practice guidance. It sets both the frequency of inspection and how our inspectors will operate to safely detect defects. It also sets out to our inspectors on what they should look for and the nature and timing of our response. That response is driven solely by the risk that any defect presents in the context of its location and the character of the use of the highway at that point.



I hope that you will be able to appreciate the work done by our teams in order to keep our highway network as efficient and safe as practicable. I know that they have a Pride in Place and I trust that they will set out each day to deliver for you in accordance with this Manual, within the resources that are available to them.

Therefore, I am pleased to acknowledge the adoption of this Highway Safety Inspection Manual, which sits with our Highway Infrastructure Asset Management Strategy and Transport Asset Management Plan, as the policy framework that forms the link between the vision that this Council holds and the delivery of services, literally, to the streets of Torbay.

Cllr Adam Billings

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Introduction

The highway safety inspection process is an important part of the management of highway infrastructure assets, specifically ensuring that the highway network remains safe and resilient. This document sets out the highway safety inspection process in Torbay. The core purpose of this manual is to set out the policy framework for the reasonable system of inspection and repair that will be operated by Torbay Council and SWISCo.

As highway authority, Torbay Council has a number of statutory duties, many of which are contained in the Highways Act 1980. In addition, other Acts impose duties and give the Council additional powers relating to the management of highways. This Highway Safety Inspection Manual sets out the Council's requirements in respect to the inspection and repair of the highway for safety, so that the Council continues to satisfy the duty to maintain the highway (Section 41, Highways Act 1980) and where there is a breach of the absolute duty to maintain, to enable the Torbay Council to make use of the defence available to the Council under Section 58 of the Highways Act 1980 through a reasonable system of inspection and repair. This part of the highway service is a vital component in the delivery of wider objectives across all transport assets, as expressed through the Local Transport Plan, Transport Asset Management Plan and other related policies and plans.

To ensure that the system of inspection and repair operated across Torbay is reasonable, the Council's approach adopts nationally recognised best practice. The development of this manual has considered the recommendations of Well Managed Highway Infrastructure: A Code of Practice, October 2016 (the 'Code of Practice'). The relevant recommendations are quoted to provide clear references between the highway safety inspection process and the best practice described in the Code of Practice. For the avoidance of doubt, wherever this manual differs from the Code of Practice, then this Manual shall be taken as Torbay Council's intended approach to highway safety inspection.

The Code of Practice sets out 36 recommendations for highway authorities across the UK with the aim of promoting the adoption of an integrated asset management approach to highway infrastructure based on the establishment of local levels of service through risk-based assessment. Relevant recommendations have been inserted into this document to reaffirm alignment with this approach.

The implementation of an effective regime of highway safety inspections is essential to ensuring that the highway network is maintained, so far as reasonably practicable, in a safe and serviceable condition. A safe and serviceable highway also makes an important contribution towards the ambitions that the Council holds, the Four Visions, which are part of Torbay Council's Community and Corporate Plan 2023:

- Thriving People
- Thriving Economy
- Tackling Climate Change
- Council fit for the Future.

Torbay Council requires that all those involved in the delivery and operation of highway safety inspections and repairs across Torbay to work within the parameters set by this manual. This highway Safety Inspection regime is delivered by SWISCo on behalf of Torbay Council. SWISCo

are committed to ensuring the delivery of an effective Highway Safety Inspection regime and support this commitment by providing its staff with effective procedures to manage risk and the guidance and training needed ensure, so far as is reasonably able, that:

- Staff can work safely.
- The highway network is maintained; and
- Torbay Council can either: evidence that the duty to maintain highways pursuant to Section 41 of the Highways Act 1980 has been met, or that they can rely upon the defence provided by Section 58 of the Highways Act 1980, in so far as this defence is afforded by a system of work that is operated in accordance with this Highway Safety Inspection Manual.

Highway safety inspections aim to identify all defects likely to create danger or serious inconvenience to users of the highway network at the time of inspection. The assessed risk to highway users is then used to establish a response time and inform the subsequent repair of all defects identified by Highway Inspectors. The approach taken to the repair of highway safety defects will follow the principle of 'right-first time' wherever possible.

CODE OF PRACTICE RECOMMENDATION 16 – INSPECTIONS

A risk-based inspection regime, including regular safety inspections, should be developed and implemented for all highway assets.

Objectives and Outcomes

The main purpose of highway maintenance is to maintain the adopted highway network for the safe use of all road users, whilst supporting the strategic objectives of Torbay Council.

Well Managed Highway Infrastructure: A Code of Practice identifies the types of highway inspection that should be considered to address three key objectives of a highway maintenance strategy. This Highway Safety Inspection Manual focusses on the network safety elements of inspection as the Well Managed Highway Infrastructure: A Code of Practice.

Network Safety	Safety Inspections and ad-hoc inspections are intended to identify all defects which may create a danger or serious inconvenience to users or the community. Risks are assessed by trained Highway Inspectors who then assign a priority for response.
Network Serviceability	Service Inspections are detailed and focussed on the requirements of specific assets.
Network Sustainability	Minimising cost over time, maximising the value to the community and maximising environmental contribution from the highway service. Inspection supports these objectives by allowing a 'prevention is better than cure' approach to be delivered.

Torbay Council's Highway Infrastructure Asset Management Strategy and associated Transport Asset Management Plan take the approach that that prevention is better than cure when it comes to managing highway assets. The Highway Safety Inspection Manual supports this by identifying defects which may impact highway network serviceability and safety. These inspection records can themselves be used in the prioritisation of works, to target areas where deterioration in the condition of the highway is causing repeat visits by teams delivering repairs to Torbay's roads.

Torbay Council has identified additional objectives at a corporate and service level, all of which are strongly supported by the safety, resilience and attractiveness to users of the highway network. In turn, the highway safety inspection process provides the 'eyes and ears' of the highway service, enabling the Council and its partners to respond to emerging issues, where practicable.

Of particular importance to the strategic objectives held by Torbay Council is the role of the local highway authority in supporting a shift away from the use of private motor vehicles towards sustainable modes of transport, especially active travel. This is an integral part of Torbay Council's vision to tackle climate change, and contributor to many of the other visions held. Consequently, inspection of each part of the highway network is required at a frequency that is appropriate to the highway networks character and use and Highway Inspectors will consider the needs of all users.

To ensure the objectives for the highway service are achieved in full, the following activities are necessary:

- Carry out systematic highway safety inspections, at prescribed frequencies on all adopted highways that are defined as highways maintainable at public expense.
- Identifying defects which require response through works to the highway.
- Prioritise planned, routine, reactive and emergency maintenance following these inspections.
- Fully investigate and respond to all third-party claims for personal injury and damage incurred whilst using the highway.

This Highway Safety Inspection Manual has been developed with the primary aim of providing direction to all staff involved in undertaking highways safety inspections, so they may carry out this task with consistency and to clear recognised processes and standards.

The Code of Practice makes a number of recommendations, this framework gives due regard to all the Council highway duties and has adopted the guidance that reflects the recommendations. Recommendation 5 is as follows:

CODE OF PRACTICE RECOMMENDATION 5 – CONSISTENCY WITH OTHER AUTHORITIES

To ensure that users' reasonable expectations for consistency are taken into account, the approach of other local and strategic highway and transport authorities, especially those with integrated or adjoining networks, should be considered when developing highway infrastructure maintenance policies.

Further to this Recommendation 7 of the Code of Practice sets out the requirement to develop and implement a risk-based approach. The information contained within this manual sets out the practices in terms of highway network hierarchy, investigatory levels, frequency of inspection and response times to repair for defects identified via a risk-based approach.

CODE OF PRACTICE RECOMMENDATION 7 – RISK BASED APPROACH

A risk-based approach should be adopted for all aspects of highway infrastructure maintenance, including setting levels of service, inspections, responses, resilience, priorities and programmes.

Highway Inspection Systems and Record Keeping

The standard and quality of the records kept is of primary importance when it comes to the effective and efficient management of the highway maintenance service, and the defence of third-party claims.

Torbay Council's highway service holds a range of data and information in a variety of systems. The application of these systems is detailed in the Council's Highway Infrastructure Asset Management Plan.

The following information is held to facilitate a maintenance management process and to form the basis of a defence, or determine liability, in the event of a third-party claim for injury, or damage, against Torbay Council, as the highway authority:

- Records of adopted highways.
- Records of safety inspections.
- Records of ad-hoc inspections following customer requests for service.
- Records of highway condition data.
- Records of highway maintenance activity.
- Records of Utility/licensees activity.
- Records of tripping accident locations.

Further, the records generated from highway safety inspection can be used in the wider asset management processes to improve prioritisation. This places a particular importance on the effective use of information technology systems in the management of highways.

CODE OF PRACTICE RECOMMENDATION 8 – INFORMATION MANAGEMENT

Information to support a risk-based approach to highway maintenance should be collected, managed and made available in ways that are sustainable, secure, meet any statutory obligations, and, where appropriate, facilitate transparency for network users.

SWISCo operates the highway inspection process on behalf of Torbay Council. The Safety Inspection part of the highways operation system is used to:

- Log and manage telephone calls and other direct forms of communication.
- Process reporting of issues made via the Torbay Council website.
- Schedule and manage routine safety inspections.
- Maintain defect information.
- Maintain asset and inventory information.
- Assist with the production of performance information.

The inspection and defect management system utilises mobile working connectivity which allows Highway Inspectors, and other key highway officers, to both access and enter data whilst on the highway network. This enables the effective logging of defects in an accurate and consistent way, in turn assisting repair gangs to identify the correct location and establish an appropriate repair method in a timely and efficient way.

In all cases, SWISCo's defect repair teams take a photograph of the highway defect prior to the repair work, and a further image showing the area of the highway that has been repaired is captured following completion of the work. These images have time and date parameters captured along with sufficient detail to locate the defect and, where possible, show its severity and nature.

These images form a record of the repair, its quality and when it was undertaken. These images help monitor the overall performance of the inspection system.

CODE OF PRACTICE RECOMMENDATION 18 – MANAGEMENT SYSTEMS AND CLAIMS

Records should be kept of all activities, particularly safety and other inspections, including the time and nature of any response, and procedures established to ensure efficient management of claims whilst protecting the authority from unjustified or fraudulent claims.

Highway Inspector Competency and Training

Torbay Council and SWISCo are committed to continual staff development and training. All Highway Inspectors undertake relevant training to both develop and maintain their skills.

Highway inspectors will be appropriately qualified within a year of commencing their employment as an inspector. During the period between a highway inspector commencing their employment and attending formal training they will be briefed by their line managers and shadow trained by a qualified highway inspector prior to undertaking any lone inspections.

The formal training will be delivered through an accredited highway inspection training course. Refresher training will take place at 5-year intervals, or when there is a significant and applicable change of policy or legislation.

The highway inspection team will be actively involved in shaping future developments of policies and procedures relating to highway safety inspection. The team will be asked to participate in relevant workshops, discussions and reviews of this area of the service. As Torbay Council's approach to highway safety inspection develops to meet the evolving needs of the highway network, changes will inform the refresher training given to all Highway Inspectors. A record of all training completed is captured in the competency records for the inspection team.

Training records are maintained by SWISCo for all staff who are actively involved in highway safety inspection.

CODE OF PRACTICE RECOMMENDATION 15 – COMPETENCIES AND TRAINING

The appropriate competencies for all staff should be identified. Training should be provided where necessary for directly employed staff, and contractors should be required to provide evidence of the appropriate competencies of their staff.

Consistency in the approach taken to highway safety inspection across the authority area is important to developing a safe, well managed highway asset. To ensure that Highway Inspectors are assessing risk consistently, standard setting reviews will be undertaken by SWISCo on a frequency no less than annually. Any resulting changes in operational practice will be recorded as an update to operational guidance and made available to all Highway Inspectors.

Standard setting reviews will be designed to allow the comparison between each Highway Inspectors approach to risk when undertaking a highway safety inspection. Highway Inspectors may be asked to separately inspect a defined section of the highway network and the results compared. This will be followed by moderation and review to identify differences and confirm best practice and determine the approach that should be taken going forward. This process will help provide a clear understanding amongst Highway Inspectors of the approach that should be taken to ensure that risk is assessed consistently and appropriately, when undertaking highway safety inspection. It should be noted that these reviews are not a test, but an opportunity for the Highway Inspectors to collaborate and secure better outcomes for highway users.

Undertaking Highway Safety Inspections

All highway safety inspections are to be recorded on handheld mobile data capture devices, which link to the highway management system to allow clear and simple processing of the defect works ordering process.

Mode of Inspection

Highway Inspectors may utilise various modes of inspection in accordance with the parameters set out in the table below.

Mode	Where Deployed	Operational Notes	Parameters
Walked Inspection	<p>This mode shall be deployed along all Highway corridors where it is safe to inspect on foot, unless dictated otherwise in this table or following an assessment of the risk posed to highway users, concludes that an alternative mode of inspection will manage risk and that mode can be safely deployed.</p> <p>On all Footways that are not adjacent to a Carriageway, such as divorced Footways, Cycleways and Promenades.</p>	<p>If inspectors assess it is not safe to undertake inspection using this mode, the reason for this will be recorded, and an alternative safe mode of inspection deployed.</p> <p>Risk assessments and any associated changes in operational practice will be recorded as part of operational guidance and made available to all Highway Inspectors.</p>	<p>Walked inspections will consider from the Highway boundary to the centreline of a carriageway in one direction, and the opposite side will be considered on the return.</p> <p>On divorced Footways, divorced Cycleways and Promenades, inspections will consider the corridor from boundary to boundary.</p>
Driven Inspection	<p>Along all Highway corridors with Carriageways where it is unsafe to conduct a Walked Inspection and a risk assessment has identified a Driven Inspection as the safe and effective mode of inspection.</p> <p>Or</p> <p>Along all Highway corridors with Carriageways where a risk assessment has identified that a Driven Inspection is a safe and equally effective mode to a Walked Inspection and can be carried out more efficiently.</p>	<p>Conducted by two people, one driving and one inspecting. This unless in accordance with an alternative approved method of working.</p> <p>Undertaken at approximately 20mph, provided it is safe to do so.</p> <p>If inspectors assess it is not safe to undertake inspection using this mode, the reason for this will be recorded, and an alternative safe mode of inspection deployed.</p>	<p>Driven inspections will consider the Highway corridor from boundary to boundary.</p> <p>Dual Carriageway sections will be inspected in both directions, each pass considering the centreline of the Highway to the Highway boundary.</p>
Cycled Inspection	<p>On all Cycleways where an assessment of the risk posed to highway users, concludes that this mode can be safely used as an alternative to a Walked Inspection.</p>	<p>Undertaken at approximately 5mph, provided it is safe to do so.</p> <p>If inspectors assess it is not safe to undertake inspection using this mode, the reason for</p>	<p>Cycled inspections will only be used to inspect the area of the Highway which must be used to cycle the designated cycle route, cycle lane or a facility for</p>

Mode	Where Deployed	Operational Notes	Parameters
		<p>this will be recorded, and an alternative safe mode of inspection deployed.</p> <p>Highway Inspectors shall stop near to each defect to record their findings.</p>	<p>cyclists (such as an advance stop line). This unless the Cycleway is divorced from the carriageway. Such Divorced Cycleways will be inspected boundary to boundary.</p>
<p>New Technologies</p>	<p>On all Highways where an assessment of the risk posed to highway users, concludes that this mode can be safely and effectively used.</p> <p>Or</p> <p>On all Highways where a risk assessment has identified that the new technology will result in a safe and equally effective inspection mode/method and can be carried out more efficiently.</p>	<p>In accordance with a safe and effective method of working approved for use following an assessment of the risk posed to highway users, usage and condition of the Highway concludes that an alternative method of work will manage risk and can be safely deployed.</p>	<p>In accordance with the approved mode.</p>
<ul style="list-style-type: none"> Risk assessments and any associated changes in operational practice will be recorded as part of operational guidance and made available to all Highway Inspectors. 			

Table 1 – Inspection Mode Parameters

Additional highway safety inspections will typically be carried out by the mode set out above to identify any maintenance works required following customer requests for service.

Where there are parked cars, or other things that obscure the highway from view, the Highway Inspector will take care, given the mode of inspection, to safely observe the highway for defects that may normally be obscured from view. Despite this care, it is noted that parked cars, and other items, may obscure a Highway Inspectors view of the highway. A Highway Inspector can only identify, and risk assess those defects seen at the time of an inspection by the mode specified.

All highway safety inspections will be carried out in accordance with the appropriate risk assessments, personal protective equipment (PPE) and other mitigation designed to ensure the safety of our Highway Inspectors, such as the use of vehicles with appropriate markings.

Highway Network Hierarchy

As stated, highway safety inspections are undertaken to ensure that the highway is safe and resilient. These inspections directly contribute to a number of corporate objectives and ensure, so far as reasonably practicable, that the statutory duty imposed by Sections 41 the Highways Act 1980 is met and the defence afforded by Section 58 of that Act is available to the Council.

CODE OF PRACTICE RECOMMENDATION 6 – AN INTEGRATED NETWORK

The highway network should be considered as an integrated set of assets when developing highway infrastructure maintenance policies.

The carriageways, cycleways and footways are inspected at a frequency that depends on the hierarchy assigned to the 'way'. Highways are grouped together based on frequencies of inspection to form a series of routes for inspection. These routes are scheduled to the Highway Inspector and form the basis for the inspection regime.

CODE OF PRACTICE RECOMMENDATION 12 – NETWORK HIERARCHY

A network hierarchy, or a series of related hierarchies, should be defined which include all elements of the highway network, including carriageways, footways, cycle routes, structures, lighting and rights of way. The hierarchy should take into account current and expected use, resilience, and local economic and social factors such as industry, schools, hospitals and similar, as well as the desirability of continuity and of a consistent approach for walking and cycling.

The Highway Network Hierarchy has been adapted from the regional model developed by the South West Highway Alliance (SWHA), consequently the network hierarchy should align across the boundary with the neighbouring highway authority, Devon County Council and wider. The SWHA model hierarchy has been refined to reflect the nature of the highway network within Torbay.

In some cases, it may be appropriate to elevate a route's inspection frequency through amending its position in the hierarchy. This may be as a response to rapid changes in condition, character or usage, which may be as the result of improvements or additions to the highway network, or significant infrastructure development. Such changes in will be the subject of an assessment of the risk posed to highway users, given the change in the character, and/or usage of the highway in question. Where that assessment concludes that the characteristics of the route have changed, then it shall be assigned to a new position in the Highway Network Hierarchy, one that aligns with the characteristics that it now displays. Risk assessments and any associated changes in operational practice will be recorded as part of operational guidance and made available to all Highway Inspectors.

The Highway Network Hierarchy in operation for the highways, for which Torbay Council is the highway authority, is defined in the following tables.

Carriageway Hierarchy

Code	Description	Characteristics
2a & 2b (Rural)	Strategic Routes	Routes for fast-moving long-distance traffic with little frontage access or pedestrian traffic. Speed limits are usually in excess of 40 mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.
3a	Main distributor	Routes between Strategic Routes and linking urban centres to the strategic highway network with limited frontage access. In urban areas speed limits are usually 40 mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety.
3b	Secondary Distributor	In rural areas these roads link the larger villages and HGV generators to Strategic and Main Distributor highway network. In built up areas these roads have 30 mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On-street parking is generally unrestricted except for safety reasons.
4a	Local Roads	In rural areas these roads link the smaller villages to the distributor roads. They are of varying width and not always capable of carrying two-way traffic. In urban areas they are residential or industrial interconnecting roads with 30 mph speed limits random pedestrian movements and uncontrolled parking.
4b	Local Access Roads	In rural areas these roads serve small settlements and provide access to a number of properties or land. In urban areas they are often residential streets, cul-de-sacs or small industrial estates.
5a	Minor Access Roads	In rural areas these form minor access roads to houses and farms. In urban areas these form minor side roads and vehicular alleyways.
5b	Lanes	In rural areas these often-narrow metalled roads serving isolated agricultural buildings. In urban areas are often metalled no through lanes serving garages or the rear of properties.
6	Tracks	Lanes and tracks that are unsuitable for vehicular traffic but may be used as a footpath, part of a Cycle Trail, or by horse riders, generally for leisure purposes.

Table 2 – Carriageway Maintenance Hierarchy

Footway Hierarchy

Code	Description	Characteristics
F1	Primary Walking Route	Areas of the towns across Torbay where there are high concentrations of retail businesses which generate significant footfall.
F2	Secondary Walking Route	Those walking routes which are the primary links to the busiest parts of Torbay. These may be links to the pedestrian areas in the centres of the towns, or may be interlinking routes to schools, hospitals and other key walking route trip generators.
F3	Link Footway	These are routes which link between Secondary Walking routes, often running as a central connection through residential areas. These parts of the highway network are generally roadside footways and may link to smaller schools and other community destinations.
F4	Local Access Footway	Footways associated with low usage, short estate roads to the main routes and cul-de-sacs.

Table 3 – Footway Maintenance Hierarchy

Cycleway Hierarchy

Code	Description	Characteristics
C1a	Strategic Cycling Routes	Core cycle routes which may be shared space. These are likely to have crossing points and may be either divorced from traffic carrying routes or adjacent. These routes provide key connections across the area.
C1b	Major Routes	Major Routes link Strategic Routes to key destinations such as the town centres, larger community facilities and tourism destinations.
C2a	Local Routes	Often advisory routes, generally through residential areas.
C2b	Rural Routes	Rural Routes, linking between major/local routes.
C3	Other Routes	All other routes on highway network, generally lower use routes.
C4	Not Suitable	Not suitable for cycling traffic/High speed routes with zero provision.

Table 4 – Cycleway Hierarchy

Highway Safety Inspection Frequency

The frequency which routes in Torbay are inspected is aligned to their position in the Highway Network Hierarchy. The table below sets out these frequencies:

Inspection Frequencies

Code	Description	Inspection Frequency
Carriageway Inspection Frequencies		
2a & 2b (Rural)	Strategic Routes	Monthly
3a	Main distributor	Monthly
3b	Secondary Distributor	3 Monthly
4a	Local Roads	6 Monthly
4b	Local Access Roads	6 Monthly
5a	Minor Access Roads	6 Monthly
5b	Lanes	6 Monthly
6	Tracks	Annual
Footway Inspection Frequencies		
F1	Primary Walking Route	Monthly
F2	Secondary Walking Route	Monthly
F3	Link Footway	Quarterly
F4	Local Access Footway	6 Monthly
Cycleway Inspection Frequencies		
C1a	Strategic Cycling Routes	Monthly
C1b	Major Routes	Monthly
C2a	Local Routes	Inspected in Accordance with Adjacent Carriageway
C2b	Rural Routes	
C3	Other Routes	
C4	Not Suitable	

Table 5 – Inspection Frequency by Hierarchy

Whilst Highway Inspectors will seek to deliver inspections to this frequency from time-to-time other factors may not make this possible. To manage the impacts of these events, the inspection frequency will be subject to the following tolerances. These tolerances are designed to allow for the various demands that may from time-to-time be placed on the highway inspection resources that are available to Torbay Council and SWISCo.

Inspection Frequency	Tolerance
1 Month	+/- 5 working days
3 Monthly	+/- 20 working days
6 Monthly	+/- 22 working days
Annual	+/- 60 working days

Table 6 – Inspection Timing Tolerance

All reports of highway safety defects made by third parties to Torbay Council will be:

Either

- Inspected,
- Triaged by a Highway Inspector,

or

- have works to make the defect safe as if were a Category 3 defect,

Such action will take place within 5 working days of the receipt of that report by the Council.

The Council aims to communicate all third party reports of highway defects to SWISCo within 1 working day of receipt.

Scope of Highway Safety Inspection

There are a diverse range of assets which make up the highway network. Items that are inspected as part of the Highway Safety Inspection are set out in the table below:

Asset Group	Scope of Defects to be Identified
Carriageways	<ul style="list-style-type: none"> ▪ Surface Defects: <ul style="list-style-type: none"> Pothole/Spalling. Crowning. Depression. Rutting. Gap/Crack. Sunken Ironwork. Missing/Defective Antiskid Material. ▪ Kerbs and Edge Defects. ▪ Surface Skid Resistance – Visual Assessment. ▪ Mud, Debris, Spillage or Contamination on Running Surfaces. ▪ Obstructions. ▪ Flooding. ▪ Markings, Road Studs. ▪ Covers, Ironwork. ▪ Highway Tree Root Damage.
Cycleways and Footways	<ul style="list-style-type: none"> ▪ Surface Defects: <ul style="list-style-type: none"> Trip Hazard or Potholes. Rocking Slabs or Blocks. Open Joint. Tree Root Damage. Sunken Ironwork. Defective Coal Plates/Basement Lights etc. Defective Mastic Asphalt in Footway. ▪ Kerbs and Edge Defects: Dislodged/Missing/Loose/Rocking. ▪ Highway Weeds Causing Slippery Surfaces or Trip Hazards. ▪ Mud, debris, Spillage or Contamination on the surface obstructions. ▪ Covers or Ironworks.
Drainage	<ul style="list-style-type: none"> ▪ Accumulation of Water on the Carriageway, Footway and Cycleway. ▪ Blocked Drainage that may Lead to the Above.
Embankments and Cuttings	<ul style="list-style-type: none"> ▪ Risk of Loose Material Falling to Injure Users or Damage Facility. ▪ Slippage Causing Loss of Support to the Highway.
Fences and Barriers	<ul style="list-style-type: none"> ▪ Integrity and Location of All Highway Fences. ▪ The Functionality of Visibility Fences Including Obstructions. ▪ Integrity of All Safety Barriers, Including Instances of Strikes.
Traffic Signs and Bollards	<ul style="list-style-type: none"> ▪ Identification of Risk to Users. ▪ Identification of damaged or missing signage. ▪ Separation of Potential Traffic Conflicts. ▪ Route Delineation in Darkness and Bad Weather.
Traffic Signals and Controlled Crossings	<ul style="list-style-type: none"> ▪ Segregation of potential traffic conflicts. ▪ Identification of defective equipment ▪ Key safety contributor for vulnerable road users.
Condition of Street Lighting, Illuminated Signs and Bollards	<ul style="list-style-type: none"> ▪ Damaged or defective lighting columns/illuminated signs and bollards.

Asset Group	Scope of Defects to be Identified
Road Markings and Studs	<ul style="list-style-type: none"> ▪ Route delineation in darkness and severe weather. ▪ Potential for damage and injury if studs are loose. ▪ The integrity of markings designed to control or manage traffic.
Bridges	<ul style="list-style-type: none"> ▪ Accident and other damage.
Street Furniture	<ul style="list-style-type: none"> ▪ Damaged or missing street furniture. ▪ Damaged or empty grit bins.
Landscaped Areas and Highway Trees	<ul style="list-style-type: none"> ▪ Obstruction of visibility and signage. ▪ Hazardous trees and branches. ▪ Leaf fall causing slippery surfaces. ▪ Root growth causing surface irregularity. ▪ Noxious weeds. ▪ Other hazards

Table 7 – Scope of Highway Safety Inspection

Defect Investigatory Levels

It should be noted that the Code of Practice does not prescribe intervention or investigatory levels. In this Highway Inspection Manual, the Investigatory Level and Defect is defined as:

A Defect is any change in condition that a reasonable person would recognise as a deterioration in the condition of the highway asset when travelling via the mode being used by the Highway Inspector at the time of inspection, this is the Investigatory Level.

When evaluating the risk presented by a Defect, consideration is given to its location, the volume of traffic, the nature of such traffic, the likelihood of regular use by vulnerable road users and the extent of visibility of the defect for approaching road users.

Highway Inspectors will record Defects that may present a risk to highway users as per the reporting requirements set out in the risk matrix described in the Defect Assessment Using the Risk Matrix section of this manual.

All Defects are risk assessed at the time of inspection and categorised based on the risk that they present to highway users. The categories of Defects used are:

Category 1 Defects

Those Defects that require immediate attention because they present a very high risk of serious injury to highway users.

Category 2 Defects

Those Defects that require prompt attention because they present a high immediate or imminent risk to highway users or because there is a risk of short-term structural deterioration will result in a high risk being presented to highway users.

Category 3 Defects

Defects that do not represent an immediate or imminent high risk to highway users, nor do they present an imminent structural failure. These Defects are likely to deteriorate and present a significant risk to highway users at the time of inspection.

Category 4 Defects

Defects that do not represent an immediate or imminent risk to highway users, nor do they present an imminent structural failure. These Defects are likely to deteriorate and present a moderate risk to highway users at the time of inspection.

Category 5 Defects

All other Defects. These Defects may deteriorate but present a low risk to highway users at the time of inspection. Given that the risk presented by Category 5 Defect is low, they need not be recorded by Highway Inspectors. Inspectors may record these Defects if they have the capacity to do so and consider the record useful in the maintenance and management of the highway asset and/or the right first-time repair of the highway, given the proximity to other Defects that present a higher risk.

Defect Assessment Using the Risk Matrix

All Defects are to be assessed using the risk assessment matrix set out below.

When assessing the risk posed by a Defect the risk factor can be expressed as:

$$\text{Risk Factor} = \text{Likelihood} \times \text{Severity}$$

It is this Risk Factor that identifies the overall risk rating and consequently the Response Time.

		Likelihood				
		Very Low	Low	Medium	High	Very High
Severity	Very Low	1	2	3	4	5
	Low	2	4	6	8	10
	Medium	3	6	9	12	15
	High	4	8	12	16	20
	Very High	5	10	15	20	25
Defect Category		Category 5	Category 4	Category 3	Category 2	Category 1
Response Time		May be recorded for programme consideration	20 Working Days	5 Working Days	By the end of the following day	1 Hour

Table 8 – Highway Safety Inspection Risk Matrix

Likelihood

Likelihood of occurrence is the Highway Inspector's assessment of the probability of the Defect's existence posing a risk or serious inconvenience to users of the highway network or the wider community.

The table below sets out the description of the likelihood evaluated by Highway Inspectors for application in the risk matrix.

Some parts of the highway network are used by greater numbers of vulnerable highway users. When considering likelihood, the presence of these groups should be carefully considered along with the position of the Defect in the Highway and the use to which the highway in question is put by all.

Likelihood	Description	Indicative Parameters
Very High	More than 90% chance of occurrence	High use part of the highway network, or where the usage is such that the risk to any of the likely users is high or very high. The specific location or nature of the Defect makes it virtually impossible for the hazard to be appreciated and therefore making it unavoidable.
High	Between 75% and 90% chance of occurrence.	Usage of the identified part of the highway network by any (or all) user groups is considered high. The specific location or nature of the Defect identified will make it very difficult for a road user to appreciate and then avoid the hazard.
Medium	Between 40 – 75% chance of occurrence.	Usage of the highway network is considered high by any (or all) users, but different modes are less likely to be present. The specific location or nature of the Defect identified may make it difficult for a road user to appreciate and then avoid the hazard.
Low	Between 10 – 40% chance of occurrence.	Usage of the highway network by all users is moderate or low. The location of and nature of the Defect is such that a user taking due care and attention could identify and avoid the hazard.
Very Low	Less than 10% chance of occurrence.	Usage of the highway network by all users is low or very low. The location of and nature of the Defect is such that most users could identify and avoid the hazard.

Table 9 – Likelihood of Incident

Severity

Severity is the extent of damage likely to be caused should the risk be realised. The size of the Defect should be considered alongside other variables such as road speed, forward visibility and the location of the Defect in the highway. When assessing severity, a Highway Inspector will consider all highway users.

The table below sets out the description of the severity evaluated by Highway Inspectors for application in the risk matrix.

Severity	Description	Indicative Parameters
Very High	The hazard presented by the Defect could result in serious injury or a fatality.	<p>If the severity is realised it will result in very serious injury and/or damage to property that places people at immediate risk.</p> <p>The Defect is of sufficient severity that road users will have no choice but to take avoiding action. This action will place road users at significant risk.</p>
High	The hazard presented by the Defect, or the short-term structural deterioration of the Defect, could result in serious injury or lead to fatality.	<p>If the severity is realised it will result in serious injury and/or damage to property that places people at risk.</p> <p>The Defect is of sufficient severity that road users will have no choice but to take avoiding action. This action will place road users at risk.</p>
Medium	The hazard presented by the Defect, or the short-term structural deterioration of the Defect, could result in injury or a serious claim.	<p>If the severity is realised it will result in injury and/or damage to property.</p> <p>The Defect is of sufficient severity that road users will have no choice but to take avoiding action. This action will place road users at risk.</p>
Low	The hazard presented by the defect as it is found or due to the short-term structural deterioration in the Defect, could result in minor injury or claim. If left untreated the Defect is likely to result in the acceleration of deterioration of the highway asset. In addition, the Defect is likely to further deteriorate before the next inspection.	<p>The severity is unlikely to result in injury or damage.</p> <p>If left untreated the Defect is likely to result in the acceleration of deterioration.</p>
Very Low	The hazard presented by the Defect as it is found or due to the short-term structural deterioration in the defect, is unlikely to result in injury or claim, but the defect will contribute to the deterioration in the condition of the highway. The defect is unlikely to deteriorate further before the next scheduled inspection.	<p>The Defect will be identified by Highway Inspectors as requiring mitigation but is unlikely to be appreciated as a defect by most highway users.</p> <p>The Defect identified is very unlikely to result in injury or damage.</p>

Table 10 – Severity of Incident

Defect Response Times

During highway safety inspections, all Defects are risk assessed and the required timescale for response determined based on the assessed risk at the time of inspection. The following table sets out the response actions and the response time for each category of Defect.

Category	Response Actions	Response Time
Category 1	<p>Where necessary to protect the public from immediate risk due to the nature of the hazard that resulted from the Defect, and it is practicable to do so, the Highway Inspector will mitigate the risk at the time of inspection.</p> <p>Where this is not possible temporary mitigation will be delivered within the specified response time. The response may be a temporary repair or the installation of traffic management to make safe the immediate risk. A permanent repair shall be programmed following this to remove future risk from the highway network as appropriate to the risk presented by the Defect following its temporary repair.</p>	1 Hour
Category 2	<p>Where necessary to protect the public from immediate risk due to the nature of the hazard that resulted from the defect, and it is practicable to do so, the Highway Inspector will mitigate the risk at the time of inspection.</p> <p>This mitigation action taken may be the erection of appropriate warning notices or signage or other traffic management arrangements. The delivery of such action will not constitute a repair unless the action is part of a documented system of work to deliver a permanent repair.</p> <p>All Defects of this category will be responded to as reactive work with the specified response time to allow either a temporary or permanent repair. Wherever possible a 'right first-time' approach to repair works should be taken.</p>	By the end of the following day
Category 3	<p>Works to mitigate the risk posed by these defects will be programmed as part of a short-term programme of works. This enables permanent repairs to be delivered 'right first-time' in most cases. If the mitigation will not be delivered in the response time identified, the site must be kept safe through a system of work designed to have a service life that will last until the permanent repair can be delivered.</p>	5 Working Days
Category 4	<p>These Defects will be prioritised and scheduled for permanent repair either as part routine maintenance work or as part of a programmed maintenance scheme. If the mitigation programmed cannot delivered within the response time identified, the site must be kept in a safe condition through another repair or system of work that is designed to last until the programmed work can be delivered.</p>	20 Working Days
Category 5	<p>The Defects categorised in this band do not constitute a safety concern and are not likely to deteriorate significantly before the next inspection date, as such no further action needs to be taken.</p> <p>These defects may be recorded for programme considerations where the Highway Inspector has capacity and considers it useful to do so.</p>	Recorded at the discretion of the Highway Inspector

Table 11 – Defect Response Times

Right first-time Repairs

Implementing the right repair in the right place is key to ensuring that the highway infrastructure remains serviceable and safe. Delivering well designed repairs as part of the initial response removes the requirement to make return visits. Avoidable return visits increase whole life cost unnecessarily and cause additional disruption to highway users.

Areas of highway that are subject to repeated make safe repairs often need significant further repair before they are suitable for many planned treatments. These further repairs also increase whole life cost.

Having identified response times across the various defect categories that enable a 'right first-time' approach to the repair of a high proportion of Defects, the risk that is presented to highway users can be minimised by:

- Maximising the number of Defects that can be repaired before their condition deteriorates to a state that they would then be categorised as Category 1 Defects.
- Maximising the overall number of Defects that can be permanently repaired for the finite resources that are available to the Council to deliver its statutory` duty to maintain the highway.
- Minimising the need to revisit any temporary repairs due to their early failure; and
- Maximising the opportunity to focus on repairing roads, footways and cycleways as they deteriorate, as opposed to a series of responses to individual defects that cannot in themselves address the underlying deterioration in the condition of the highway.
- Minimising disruption to the highway user.

CODE OF PRACTICE RECOMMENDATION 19 – DEFECT REPAIR

A risk-based defect repair regime should be developed and implemented for all highway assets.

Wherever practicable, a 'right first-time' approach should be taken for a repair. This may take account of the residual service life of the asset in question. For example, if the residual service life is short, a lower standard repair may be appropriate to keep the asset safe until the planned intervention is delivered.

In some cases, such as when a more complex highway structure, such as a bridge is damaged, it is unlikely that a 'right first-time' repair can be delivered in the time scales set out in this manual. To manage the risk to road users it may be necessary to install a temporary repair, or appropriate traffic management measures, until a permanent repair can be delivered. This approach allows more complex repairs to be planned, which in turn gives the opportunity to improve the financial efficiency of the eventual repair and manage environmental impacts and/or mitigate the overall disruption caused highway users.

During periods of exceptionally high demand such as after severe weather events, it may be necessary to deliver a higher portion of temporary repairs to keep the highway network safe. Safety should always be the overriding factor but whenever it is possible to do so, more robust repairs should be programmed.

The approach outlined in this manual enables a right-first-time approach to repairs to be taken, wherever it is practicable to do so. This approach will reduce the risk to highway users in the longer term and result in a:

- Reduction in the resources used on repeated defect repairs;
- Reduction in the exposure of the workforce to danger;
- Reduction in disruption to highway users;
- Reduction in the overall risk to highway users; and a
- Reduction in the environmental impact of highway maintenance.

The specification for all repair works shall be in accordance with Torbay Council and SWISCo's approved specifications. The defect repairs will be organised through SWISCo's operating processes and quality assured by the adopted procedures.

Review of the Highway Safety Inspection Manual

It is important to review the inspection processes and update this manual and the associated operational guidance to account for lessons learnt from the practical application of highway safety inspection and repair in Torbay.

The table below sets out the principal areas of operational review. Operational review may result in changes in the operational guidance that is issued to staff, the specification of the works delivered in response to any Defect, or the frequency that any part of the highway asset is inspected based in its designation within the Highway Network Hierarchy. All amendments to the operation will conform to the parameters set by this Highway Safety Inspection Manual.

Area for Review	Tolerance
Designation of Routes in the Hierarchy	No Less Frequently Than Every Two Years
Inspector Moderation and Collaboration	No Less Frequently Than Annually

Table 12 – Operational Review

This Highway Safety Inspection Manual shall be considered for review by the Director responsible for highway services for Torbay Council on a frequency of no less than 5 years or within a year of any significant changes to relevant highway legislation or national best practice guidance. This unless legislation or a decision taken in accordance with Torbay Council’s Constitution dictates otherwise.

The Director’s consideration to review of this manual may conclude that: no review is required at that time; or that a review is required. Where the Director decides that a review is required, the Director shall set out reasons, the parameters and timeframe for that review.

The product of any review of this Highway Safety Inspection Manual shall be a decision report and, as appropriate, a revised Highway Safety Inspection Manual, which shall be taken to formal decision in accordance with Torbay Council’s Constitution. Where the Director concludes that no review is required, a record of that decision shall be made in accordance with Torbay Council’s Constitution.

Version Number	Summary of Amendment	Date Complete
First Issue	2024 version of the Torbay Highway Safety Inspection Manual.	16/02/2024
Final Issue	2024 version of the Torbay Highway Safety Inspection Manual.	30/06/2024

Table 13 – Amendment Log